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REPORT

OF THE

DIRECTOR OF PHYSICAL TRAINING

IN

PUBLIC SCHOOLS

OF

WASHINGTON, D. C.

1896-97.

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(REPRINT FROM ANNUAL REPORT.)

REPORT

OF THE

DIRECTOR OF PHYSICAL TRAINING.

REBECCA STONEROAD.

WASHINGTON, D. C., *June 30, 1897.*

DEAR SIR: The school year of 1896-97 brought to a close the eighth year of physical training in the Washington public schools. Since eight years correspond in length of time with the entire school life of the child previous to entering the high school, it is my pleasure to make a comprehensive report of all which has been accomplished in this time, to show the conditions of our schools which bear directly on the healthy growth of the child, and to restate those facts which show that body training is a part of the framework of the education of our children, by means of which we strive to make human life all-sided, efficient, powerful, and happy.

The great question, "What ought the public school to do for the child?" has its first answer in the heart of every parent, that everything which promotes and conserves the bodily health of the child intrusted to the care of a teacher five hours of the day is of first importance. Since the child is taken from the home to be educated by the state, it becomes the duty of school authorities to see that the assembling of great numbers of children to sit for consecutive hours of the day, be under the best hygienic conditions possible under the circumstances. This duty is emphasized when we realize that the resisting power of the young is less than that of adults, making them more susceptible than their elders to the evils which arise from bad hygienic conditions. The teacher, acting for the parent, should see to it that in so far as she is able the schoolroom is a place where body growth keeps pace with growth of mind, where the vital powers have free play, unrestricted by bad positions and impure air, where suffering is unknown, and where, above all other things, is sought the happiness of the child, since in happiness is the surest source of health, both mental and physical.

HYGIENIC AND EDUCATIONAL VALUE.

One great factor in promoting this ideal, healthful school life, is the setting apart of a daily period for bodily exercise whereby muscles which have become weary from long sitting, have an opportunity to stretch and grow. By such exercise the circulation is increased, the brain cleared, the lungs expanded, pure air entering therein, and the involuntary muscles exercised, aiding in the proper functioning of the entire organism. In the report of the Committee of Fifteen appointed by the National Educational Association to consider the correlation of school studies, of which committee Dr. Harris our Commissioner of Education was chairman, physical training was recommended in the following words: "In regard to physical culture, your committee is agreed that there should be some form of special daily exercises, amounting in the aggregate to one hour each week, the same to include the main features of calisthenics and German, Swedish, or American systems of physical training, but not to be regarded as a substitute for the old-fashioned recess established to permit the free exercise of the pupils in the open air. Systematic physical training has for its object rather the will training than recreation, and this must not be forgotten. * * Systematic physical exercise has its sufficient reason in its aid to a graceful use of the limbs, its development of muscles which are left unused or rudimentary unless called forth by special training, and for the help it gives to the teacher in the way of school discipline."

Of the value of exercise in general little need be said, since its fundamental principles are matters of general information. We are specially concerned in that phase of the subject which bears directly on its value as a part of the public school curriculum. That which lays claim to a place in every broad scheme of education is systematized physical exercise, in contradistinction from mere physical exercise in general or free play alone. Exercise alone is not training; training comes only through specific direction and methodical execution.

By systematic physical exercise we mean the exercise of the body according to certain methods of procedure based upon our present knowledge of physiology and psychology. Its claims for consideration are:

First. It seeks organic perfection. Many muscles, such as those of the abdomen and chest, the diaphragm, and the intercostal muscles, under ordinary circumstances are little exercised. Special attention to these increases the functional power of the vital organs within, on which so much of health depends.

Second. All parts of the body are developed equally, aiding the child in attaining his maximum growth, and at the same time developing symmetry of form.

Third. Muscular coordination is secured, whereby the child gains control over all his muscles, fitting him to perform without waste of energy all the acts which, under ordinary circumstances, he is called upon to do.

Fourth. Grace of motion is cultivated. This subordination of the body to the will is the source of all graceful action.

Fifth. The power of inhibition cultivated in the nervous system by refraining from all unnecessary movements in gymnastic work is of no small import when we consider that without doubt it has its effect upon character, strengthening it in moral actions demanding self-control.

It is the formation of right habits of action, referred to under the last three heads, which makes physical exercise in the school subserve an educational end. Gymnastics are given as a means to an end, and not as an end in themselves.

PEDAGOGICAL VALUE.

The pedagogical value of physical training not being so clearly understood, I venture to go more into detail. Since much of the work of education deals with mental processes, and since the processes of the mind are intimately connected with the brain, whatever their relation may be, it is well to consider the physiological effect of exercise on that supreme center of the nervous system. Not only is the brain the organ of thought and volition, but here are received the impressions of the outside world through nerves, muscles, and the sense organs, by means of which education is carried on.

Experiments on lower animals have shown that their brains have distinct areas, which when stimulated by electricity cause certain parts of the body to move. A current of electricity applied to one part of the brain of a certain animal bends the leg, to another part turns the head, etc. The same stimulus applied to the corresponding part in other animals invariably produces the same result. Based on these experiments, a large portion of the brain of the dog and other animals has been mapped into areas or centers, which when excited cause certain definite movements. If one of these centers be removed, the part of the body whose movement it controls becomes paralyzed and wastes away, thus corroborating the theory that every movement has its corresponding center in the brain, called its motor center. Owing to the fact that in the treatment of brain diseases the irritation of certain parts shows manifestations similar to those produced by the corresponding parts in animals, students are led to believe that the human brain has what is called its localization of function. In a similar manner, with some limitations, are known the situations of the centers of sight, hearing, smell, taste, and touch—the sensory centers.

It is with these centers of sensation and motion that education chiefly deals. For this reason education has been called a training of nerve centers. James Crichton Browne, an eminent English neurologist, says:

“Now the centers of motor ideation require to be exercised in order that they may be properly developed and may contribute usefully to mental processes, and hence muscular training is likely to assume a more important and precise place in our educational system of the

future than it has hitherto done. * * * And as regards the motor centers, it can only be said that they are well used when the muscles with which they are in relation are well used also. We thus see that an extensive region of the brain in which the motor centers are situated, and which is of course in intimate communication with all the other regions of the brain, can only be fully vigorous when the whole muscular system is fully vigorous also, and we recognize that good muscle work is essential to good brain work."

From which it is readily seen that one of the strongest arguments in favor of physical training from the standpoint of the educator, lies in the fact that the best mental results can be obtained only when all physical aid has been rendered to the proper functioning of the nervous system. The great truth we must ever bear in mind is that physical education, like all education, is a training of the nervous system, and bears a direct relation to mind in that all mental action is dependent on the nervous structure and its blood supply.

Considering the brain as a collection of organs, rather than a single organ, it follows that if a well-balanced mind be sought all the parts should be developed equally. The exclusive cultivation of one faculty may lead to the disproportionate development of its representative in the brain. In the training of the young this is an important fact which our new methods of education hold constantly in view. Herein lies one of the educational values of manual training, drawing, modeling, and physical exercises. In seeking the development of the body as a whole we are aiding in the development of the brain as a whole.

Another view of the subject emphasizes its importance as a coordinate branch of instruction. With the new education—teaching by observation and experiment—has come a training of the organs by which knowledge is first acquired. This implies a training of the muscles and nerve centers of hand and eye which are concerned in perception. Those of the trunk and legs receive little or no attention. Manual training, drawing, sewing, and much of kindergarten work call upon the higher nerve centers for their execution. How important it is that the lower fundamental nerve centers of trunk and legs, upon whose healthful action the former depend, be so strengthened as to form a good basis for the operation of the higher nerve centers. There is no doubt that by means of gymnastics, exercising specially the trunk and legs, the higher activities are assisted as well as the fuller development of the child secured.

INTRODUCTION OF PHYSICAL TRAINING.

In the fall of 1889, the present director with two assistants was given charge of the new department of physical training in the schools of the first eight divisions, since which time, owing to the increase in the number of schools and the development of this department, the number of assistants in the lower grade schools, has been increased to five, while two special teachers have been appointed for girls in the high school.

At that time gymnastics had been introduced into only twelve cities of the country, mostly in the West, these cities being in the order of introduction, Jamestown, N. Y., Milwaukee, Omaha, Kansas City, Mo., Chicago, Davenport, Ia., St. Joseph, Mo., Canton and Cleveland, O., Holyoke, Lowell, and Malden, Mass. Through correspondence with the largest of these cities it was found that with few exceptions the work was in charge of German turners who had introduced with modifications the German system of gymnastics. Since then physical training has been introduced into almost all the large cities of the East, so that the number of cities which have regularly introduced and maintained physical training in their schools, is now over one hundred.

In 1889 the great problems bearing on the relation of physical training to the public school, were yet in their infancy. In the same year a memorable conference of educators and leaders in the work, presided over by William T. Harris, the Commissioner of Education, was held in Boston, for the purpose of discussing this subject in all its phases, "with a view to clearly ascertaining the needs of schools and determining how they may best be met." This meeting was attended by our superintendent of schools, who returned to Washington with the best thought of the conference.

Nowhere were we able to obtain a thoroughly graded course of exercises, by experience found practicable for the schoolroom, fitting into the eight grades of the school, changing with the years, and progressing with the growing powers of the children.

Near the close of the year 1891 the director of physical training was given a leave of absence to visit and observe gymnastics in Germany and Sweden, which countries have been foremost in the training of the youth to perfect physical manhood. Carrying letters of introduction from the Secretary of State and the Commissioner of Education she was enabled to see the work under the most favorable circumstances.

After a careful consideration of the two systems of physical training which had been transplanted to this country from Germany and Sweden, it was decided to choose those desirable features which recommended themselves on account of their physiological or other value, and with these as a basis to formulate a course of physical training. It was thought best to study the laws of physiology, psychology, and hygiene; to study the child in the schoolroom, and, knowing the principles of physical training, to work along those lines which seemed to meet the demands of our American children, and the conditions of the Washington schools—the problem in hand.

A plan of administration, described later in this report, was adopted which proved so satisfactory that it has been continued up to the present time. Teachers' meetings were held to instruct teachers in the first principles of exercise and in such simple movements as were first given to the children. Special lessons were given to the children in the classroom for the observation of teachers of that grade, after which hints

and suggestions in regard to carrying on the work were noted by the teachers.

The most effective agency in securing the careful introduction of physical training with the best results, was the institution of the policy of having all new exercises taught first to the class by the special teacher, who leaves with the regular teacher a lesson sheet containing printed directions in regard to the same. By this plan each class in the District of Columbia receives the new exercises first from the hands of the specialist, who has carefully prepared her method of teaching and spends thirty minutes in presenting the same. The regular teacher in this way observes the model lesson taught in her room to the same children with whom she works daily.

We began by instructing pupils in regard to a good standing position, healthful sitting positions, best manner of rising and sitting, graceful carriage of the body in walking, erect carriage of the body in ascending and descending stairs, and deep breathing, all classes receiving special lessons in regard to the same. Following this came special exercises tending to strengthen those muscles actively engaged in maintaining normal positions. Since all schools alike were ignorant of the first steps in body training and had to start with the simplest movements, the first attempt at grading was made by dividing the exercises into large groups suitable to primary, intermediate, and grammar schools.

EXERCISES.

The qualifications of an exercise to warrant its introduction into the schoolroom are four in number. It must first of all have a definite purpose, hygienic or educational; it must be adapted to the age of the child; it must be adapted to both sexes, and it must be capable of execution between the desks. The first requisite is all-important in a scientific system of physical education. Exercises are not chosen merely because they look pretty or are easy of execution.

Much of the school work being done while sitting at a desk, the physical tendency is inward and downward. For this reason exercises which stretch the muscles outward and backward are given special importance, thereby counteracting the effect of working while sitting. Deep breathing, with or without arm movements, is never omitted. Movements which bear directly on the internal organs, aiding the involuntary muscles to do their work, are specially sought. The muscles of the chest, waist, and back are exercised whenever possible. A series of exercises bringing into action the muscles of the trunk, legs, arms, and neck, increasing the blood supply in these respective parts, constitute a gymnastic lesson.

SYSTEM.

A system of physical training may be good theoretically, physiologically, anatomically, but as one to be placed in the public school may fail. So many elements enter into the successful workings of any sys-

tem, that one which fails in one city may be successful in another. The executive ability of the supervisor, the quality of the instruction given, the intelligence and sympathy of the regular teacher, the condition of the schoolroom, the amount of money allowed for gymnastic purposes, the cooperation given by the community, all help to make or mar any system.

In order that our work may not fail in being systematic, we have endeavored to apply certain tests of qualifications which seem to us necessary in a system of physical training.

- (1) Is it based upon the needs and laws of the human body?
- (2) Does it aim to secure a good carriage, a symmetrical and harmonious development, and the power to make the best use of the body in the everyday acts of life?
- (3) Is the whole a unit or entirety, with dependent parts joined for definite purposes?
- (4) Are the parts sequential, proceeding from the simple to the difficult, and aiming at definite and related results as the work advances?
- (5) Is it graded, so as to be adapted to the age of the pupils?

The exercises lead from those which are simple to those which are complex. An exercise often forms the basis for another which is to be given in a following lesson. Later in the year simple exercises are combined. Thus, the year's work by progression makes one connected whole, one part being dependent on another.

METHOD.

Each lesson consists of a series of distinct exercises, each having a definite purpose, the whole bringing into action all parts of the body. Each exercise has its definite name which suggests the movements to the child. This name is given to the class by the teacher and becomes a preparatory command, telling the children what they are to do when the signals or commands for execution are given.

All movements are taken at words of command or on counts used as commands. In this way we are able to obtain precision in execution, so important from the standpoint of training, and secure the desired rate of movement. Each movement is repeated a number of times, sufficient to obtain full benefit from the exercise, but not enough to cause fatigue.

As the child works, he is led to think that here is an exercise which is good for him; that in order to derive the greatest benefit from it he must do it in just the right way. Thus the mental attitude is different from that of the child in a memorized exhibition drill whose mind is burdened with remembering the number of movements to be taken in a certain direction and the number of counts to be made at a given pause; nor is the state of mind that of strained expectant attention as to what word of command is to come next, with the dread of failure to hear and execute instantly.

The whole work is carried on not for the sake of drill, but as a means to an end. Exercise is not an end in itself, but one of the means by which body and mind are enabled to function at their best.

NOMENCLATURE.

In naming exercises and in the use of words for commands, or to express direction of movement, we have used good English expressions and have avoided unnecessarily technical gymnastic terms. A nomenclature has been settled upon which answers all purposes and yet is not obscure to one new in the work.

GRADED COURSE.

It is absolutely essential to the permanent success of public-school gymnastics in a large city that the course be thoroughly graded, corresponding with the years of school work, and that the exercises change with the growing powers of the child. When a boy passes into a higher grade he does not want to repeat in the same way that which he did the year before.

It is only after years of careful discrimination and much thought that this has been accomplished. Beginning at first, in 1889, with three divisions, it was not until last year that eight grades of work were instituted. This means, in the future, eight years of varied work for children passing through our schools from the lowest grade to the high school. These years from 1889 to 1896 have been the transition stage between the introduction of physical training and the formation of a broad working basis for all future efforts.

All schools of a certain grade throughout the city have the same work which is done at about the same time of the year. In this way uniformity is secured and the work as a whole kept well in hand.

All eighth-grade pupils exercise with dumb-bells, all seventh-grade pupils with wands. Sixth and fifth grades take fancy steps in connection with the regular exercises. Fourth and third grade children have free-standing exercises, while the work of the second and first grades has greatly the element of play.

No matter what it may be, a course of gymnastics should be such that changes may be easily made as the work grows and conditions vary. It must be adjustable in order to meet future contingencies. If we would profit by the late discoveries and results of scientific investigation in the domain of physiology and psychology, our course of study must be elastic and capable of change whenever demanded.

PRIMARY PLAY WORK.

The physical exercise of the youngest children are playful in character. It has been our desire to form a connecting link between the plays and games of the kindergarten and the precise gymnastics beginning in the third year. The children use their imagination and act out a con-

needed and consistent story in a series of body movements which have been within their daily experience outside of school yet make good gymnastic exercises, bringing into action all parts of the body. The story selected is one which will arouse interest, as one connected with Christmas, or a trip into the country. It is in keeping with the season of the year and the natural sequence of events. The entire lesson becomes one of happy delight, yet at the same time follows the principles of systematic body training given in the higher grades. Action, imagination, and imitation are the chief characteristics of this play work.

In this way are brought forth the natural movements of childhood, and at the same time is secured that coordination of muscles highly desirable in all gymnastics for the young. Allowance is made for the inability of small children to make movements with great accuracy.

Large movements involving large muscles are sought above all others as being the best for young children. Much of school work being necessarily an exercise of the fine muscles of hand and eye, we specially need such movements to counteract any evil effects.

Such work is not alone the spontaneous activity of play, but play directed toward educational ends. Activities and emotions are turned into those channels which lead to the physical, moral, and mental well-being of the child.

In connection with each story and supplementing it is a little play or game having gymnastic value. Good games in which all can join, which bring into action large muscles, and which can be played in the schoolroom, are rare, and tax to the utmost the inventive powers of those having the work in charge.

BEAN BAGS.

All children of the second grade have been supplied with bright red bean bags five inches square, made of galatea cloth. These give to pupils something with which to play. The bags are placed on the floor and jumped over, tossed in the hands, thrown to partners, and in connection with them there have been invented many excellent exercises and attractive games.

WANDS AND DUMB-BELLS.

Three years ago, at an expense of \$1,200, all eighth-grade schools were furnished with dumb-bells and all seventh-grade schools with wands. It is the opinion of the school authorities that the success attending their introduction amply justified the expenditure. Although the extra weight moved is small, the contraction of the muscles becomes stronger, and added force is given to the movement which at the same time is taken with more determination. Interest and enthusiasm come to the child from handling something. This piece of light apparatus becomes to him a plaything. Pupils in the lower grades feel that they are working up to something higher. Their exercises lead up to the

proper handling of the wands and bells. As in the free movements the plan of having distinct hygienic exercises is followed in this work.

It has developed that the number of good exercises sufficiently varied, which can be taken between the desks with wand or dumb-bells in the hands, is great. By the use of the side position, diagonal position, by alternation, and by increasing the distances between children, the number of exercises invented has been greater than could be taken in the amount of time allotted during the year.

The dumb-bells are arranged in pairs around the room under the black-board, each being supported by a small iron hook screwed into the wood and holding the ball of the bell in its socket. One large rack holds all the wands. In order to obtain these the pupils walk in line around the room and without losing step each pupil grasps his wand or bells. These are replaced in a similar manner. This means that the pupils in these classes receive daily practice in a good carriage of the body while walking.

FANCY STEPS.

A special feature of fifth and sixth grade work in connection with the regular physical exercises, consists of fancy steps taken when walking in line around the room or in the halls. This work grows out of the walking lessons which are frequently given in the lower grades. Besides being excellent exercises for the legs, these steps tend to develop grace and ease of movement. The rhythm is specially pleasing to the children and increases their delight in the exercise.

VOICE WORK.

A thoroughly planned course of exercises for the improvement of the speaking voice was introduced two years ago into the third, fourth, fifth, and sixth grades. It is in these grades that most effective work can be done to break up bad habits of speech. A few minutes immediately preceding the regular physical exercises are devoted to the enunciation of words and sentences, including exercises for articulation, tone, and pronunciation.

Such work naturally connected itself with the regular physical exercises, because the natural deep breathing and good positions taught are most favorable to good tone production, while the physical condition of the child affects his quality of tone.

Nasal or throaty delivery of words, bad pronunciation, and general indistinct enunciation, which may consist in defective articulation, running words together, or mumbling, are all common faults of the schoolroom which we have attempted to eradicate.

The voices of most children are naturally sweet and beautiful. It is our work to keep them as they are, and to prevent, as far as possible, harsh tones which are likely to be unconsciously imitated. Most essential is it that the teacher set her class the example of a good pure tone. We believe that the best voice training for children resolves itself into

a training of the ear. The child should learn first of all to hear his own voice and appreciate its quality, then by imitating the good, the best in him is likely to follow.

This effort toward better schoolroom voices has the tendency to make the teacher critical at all times during the day and feel responsible for carelessness on her own part as well as on the part of the children.

There is great room for improvement along this line of work. Of the need and value of such drill, teachers have frequently spoken, so that our efforts in that direction have been appreciated. We believe that after a few years of practice, and with better knowledge on the part of the teacher as to how to teach this new line of work, the results will tell for the good of the voices of our children in ordinary conversation and public speaking.

PRACTICAL APPLICATION OF WORK.

Teachers have been impressed with the importance of making a practical application of the lessons in rising, sitting, standing, walking, ascending and descending stairs, by insisting on the best when any of these movements are taking place in the regular conduct of the school. It is only by such daily practice that good habits are formed. Pupils passing down stairs walk in line, keeping step if the principal so desires, but unlike the stiff marching encouraged by the loud beat of a drum.

Constantly to encourage and hold a pupil up to that which he knows to be the best, is a labor of great patience, requiring most faithful attention. The burden of this work falls upon the lower-grade teachers, in whose schools habits are forming.

The greatest freedom is permitted in regard to positions while sitting, provided that any chosen position be not an unhealthful one nor so constantly assumed as to be injurious to the symmetry of the body. By frequent changing, relief is obtained from the constraint of the sitting period. Lack of variety in position while sitting, even for a comparatively short length of time, with its enforced inactivity, is the source of great weariness to the child, affecting his mental as well as physical development. For this reason the one best sitting position is insisted upon only during the writing period and gymnastic exercises.

SUPERVISION.

We have, under the direction of Superintendent Powell, a school attendance of more than 30,000 children. All of these pupils receive the benefit of systematic daily exercise, the work being carried on in every schoolroom of the city and in the county, with the exception of a few small buildings which are difficult to reach.

A corps of special teachers of physical training, consisting of a director with five assistants, give instruction to each class, which is visited regularly once in every twenty school days. Each special teacher

has a number of school buildings under her charge during the year, for the work of which she feels responsible. Upon the occasion of her visit the regular teacher willingly reviews a part of the previous lesson, then follows the teaching of the new lesson, consisting of an entire set of new exercises. In this way one-half hour or more is spent once a month in each room.

Merely giving exercises to the class is not the entire work of the specialist. Her whole purpose, to which all effort is directed, consists in teaching the teacher, of which presenting a model lesson is but one part. A few minutes spent in reviewing by the regular teacher gives the special teacher an opportunity to see the quality of work done daily. She thus learns wherein the teacher needs assistance and finds out weak points of class work to be specially strengthened. After the little review, helpful suggestions are made quietly to the teacher. If more time is needed, the giving of these suggestions is delayed until recess time. It is from the work seen that a record is kept of the teacher's work, by which from time to time progress can be noted.

A sheet of paper containing printed directions in regard to the lesson is left with the teacher. This sheet gives the names of the exercises, the average number of times each exercise is to be taken, the signals or commands to be used, and the definite directions in regard to the manner of execution. By means of this the regular teacher is able to carry on the daily work without falling into errors. The directions are there, to be referred to when any doubt arises in regard to the exercises. She feels that she has definite work to do, which to the average teacher is a gratification.

Before the special teachers start out to teach a new set of lessons the director spends two half days teaching these lessons in all grades for the observation of the five assistants. Many of these exercises may never before have been tried in the schoolroom. When these lessons are over a consultation is held in regard to the same, the work studied from all points of view, the method of teaching noted step by step and suggestions freely offered, so that each teacher starts out on her work having obtained the best thought of the entire corps. One day is spent by the director with each of her assistants, observing their teaching and making helpful suggestions in regard to the same. Thus no pains are spared to make the teaching as effective as possible.

MEETINGS OF SPECIAL TEACHERS.

The special teachers meet after school on Tuesdays to consult in regard to everything pertaining to the interest of this department and report the condition of schools visited during the week. A record of the observed work of each teacher visited is reported as being "very good," "good," "almost good," "fair," or "poor." These meetings are valuable in securing united and sustained effort along any line of improvement. By means of them the director is able to keep in touch

with the actual work done by each teacher in the District, to know the teachers who need her special help, so that when visiting a school building she is enabled to spend her time more effectively in bringing the work of all the schools up to an equal standard of excellence.

TEACHERS' WORK.

The value of the work as a whole lies in the actual daily work of each teacher. For this reason when visitors come to see our physical exercises the regular teacher is requested to show what the children do under her guidance.

By request of the supervising principals a report was made to them at the end of the year showing the standing of their teachers. This report showed the average work of each teacher during the year. Of the 560 schools reported 19 were poor, 75 were fair, 146 were almost good, 258 were good, and 62 were very good. We have endeavored to make the terms as usually understood express the actual quality of the work. Since those "almost good" were quite satisfactory, the number of teachers who did satisfactory work was 466, which constitutes 83 per cent of the whole number reported. This is a record of primary as well as higher grade schools.

Too much can not be said of the cooperation which has so generously been extended by the teachers, without which all our efforts would have been in vain. As a class our teachers are young, enthusiastic, and intelligent, for which reason the introduction of a new department in the schools was not the uphill work it might have been under other circumstances.

NORMAL SCHOOL.

The professional training of the normal class consisted of two parts: First. Weekly talks by the director on the principles of physical training, preceded by a study of the physiology and anatomy of the human body, and particularly of the nervous system as a basis for psychology. These talks treated of all related subjects included in personal and school hygiene and the relation of physical training to other work of the school. Second. Observation of model lessons, practice in teaching the same, and discussion of everything pertaining to the art of teaching. These model lessons were given in the practice schools by the director for the observation of all pupil teachers.

Each pupil teacher had sole charge of a class in physical exercises for a period of three weeks, at the end of which time she gave a lesson for the critical observation of the director and whole normal class. Immediately after each lesson the work seen was freely and fully discussed by all, in the normal-school room. Pupil teachers told what they had observed, the good points being first noted and reasons given for commending the same. Next followed unfavorable criticism, with helpful suggestions for improvement in regard to method and manner.

By frequent questioning the principles of body training were constantly reviewed.

It has been the plan of the normal school to assign to each critic teacher certain subjects for her special attention. By this arrangement work in the normal school was strengthened by the daily criticism of a critic teacher who was able to correct errors as soon as noted.

RECESS PLAYS AND GAMES.

Plays and games form a necessary part of any general system of physical training. They supply the element of recreation. Play has the hygienic value of securing the greatest amount of physical work with the least expenditure of mental effort. Gymnastics do not take the place of play, nor does play take the place of gymnastics. For a perfect system of physical training the two should go hand in hand.

Since the conditions of the schoolroom are such as to make free play impracticable in the higher grades, it would seem that the best opportunity to obtain this recreation is at the time of the daily recess. In my last report I wrote concerning the school recess as follows:

A few years ago there was a movement in certain parts of the country to do away with the daily recess on certain moral grounds. It would seem wiser by special attention and supervision on the part of the teacher to improve the daily recess, than to do away with an institution which offers the very best opportunity for rest, recreation, and the spontaneous activity of play. Yet the school recess as carried on is capable of the greatest improvement. In many cases the teacher is absolutely ignorant of what her pupils are doing during this playtime. So far as observation goes, the children indulge chiefly in screaming and aimless romping, or else in moping and reading. Pupils could be taught certain games adapted to their age and to the circumstances, over which the teacher could have oversight without interfering with the spontaneity of the children. Children should be encouraged to bring their jumping ropes and balls to school. Many pupils would be willing to contribute bean bags, a bean board, jumping ropes, and stilts.

Whenever the weather permits, all such play should be in the open air of the playgrounds. A series of plays and games adapted to the different ages of the children can be obtained from the director of physical training. Having such guidance, knowing what can be done, how to do it, and having the means by which to do it, pupils can take the initiative and proceed according to taste or inclination, thereby making the daily fifteen minutes given for recess a period of physical profit as well as mental recreation.

Since writing the above I have collected from many sources some hundred plays and games which are adapted to the play room or playground. These have been roughly divided into primary, intermediate, and grammar. I propose to have these printed and distributed to the teachers. Principals of buildings who so desire can have the definite directions for carrying on the exercises which they may choose to teach. It has been suggested that the older pupils at first teach the younger ones games new to them. This is practicable, since we have all the eight grades in most of our buildings.

ADJUSTABLE DESKS AND SEATS.

Since 1895 all new buildings have been furnished with adjustable seats and desks, while in old buildings where worn-out furniture has been replaced by new the adjustable has been substituted. In some other rooms a few of these seats and desks are placed in the front or back of the room to meet the demands of children unusually small or large for the grade. This means that many children are now sitting, and that all are to sit in seats and at desks which fit them. The seats are adjusted to the height of the knee, so that the feet can be placed flat on the floor. The desks are adjusted to the height of the body while sitting, so that the forearm can rest on the desk during writing without raising the shoulder or rounding the back. This sitting height varies greatly in individuals who have the same height when standing, due to lack of proportion between length of leg and length of body. As a rule these desks are placed so that the front edge is directly over the front edge of the seat. This prevents the tendency to slide down in the seat, so common, and obviates the necessity of leaning so far forward when writing, yet admits of easy rising and sitting.

This nice adjustment of seat and desk to the child, obviating the necessity of assuming cramped abnormal positions specially harmful at the growing period, besides adding to his comfort, should be found in every schoolroom in the city.

VERTICAL WRITING.

There is some reason to believe that much of the spinal curvature found in adults has been produced by faulty writing positions taken in the schoolroom during the period of growth. This may have been due to the turned and twisted position taken when writing, to carelessness on the part of the teacher, or to bad-fitting desks and seats. Desks too high or too low, seats too high or too low, desks and seats not properly placed in relation to each other, all produce unhygienic, unsymmetrical positions of the body in writing which when constantly assumed tend to become fixed.

In vertical writing, as taught in the lower grades, the paper is placed directly in front, parallel with the front edge of the desk, the body is held square to the front, with chest up, and the bend forward is made at the hips. This is by far the best position from the standpoint of health. With the introduction of vertical writing, the gradual introduction of adjustable desks and seats, and care and patience on the part of the teacher, there is now no reason for bad positions when writing.

SEPARATED WARDROBES.

A first attempt was made last year to separate outer wraps in the cloakroom. This was done in the new Greenleaf School, of southwest Washington. A board partition, averaging eight inches in depth,

entirely separates the clothing of one child from those of his neighbor. On the whole this is quite practicable and satisfactory, since it accomplishes the purpose of complete isolation, with a fair amount of ventilation. It is to be hoped that old buildings, as well as new ones, will be ere long provided with some such means of preventing the transfer of disease germs, as well as for securing greater cleanliness.

In investigating the subject I was unable to find any city in which separated wardrobes were in use in lower-grade schools. In high schools they are not uncommon. Even literature on the subject was not to be found among the best German and English writers of books on school hygiene.

The Narragansett Machine Company, of Providence, R. I., has been experimenting in this line and has placed on the market a wardrobe in which the partitions curve in at the bottom to permit sweeping underneath, thereby preventing the accumulation of dirt. A slanting rack for rubbers is at the bottom, and a gutter to catch drippings from umbrellas or rubbers. Above the large hook for clothing is a slat rack for holding lunch baskets. The Pawtucket, R. I., school board has ordered 200 of these wardrobes for a new school building.

WATER FILTERS.

Two thousand dollars were appropriated last year for furnishing water filters for schools. The same amount has been asked for this purpose to be used next year, and it is hoped that this will be done yearly until each building is supplied. Children fortunate enough to attend buildings in which these filters have been placed are enabled to drink pure water, which in most cases it would be impossible to obtain at home.

MEDICAL INSPECTION.

I wish to assist in urging systematic daily medical inspection as a means of improving the physical condition of the child in school and reducing the possibility of contagion. It needs the critical eye of a medical expert to detect cases of nervous disorder, low nutrition, and diseases in their incipient stages. At intervals of at least one year examinations could be made to discover imperfect vision or defective hearing. All cases should be called to the attention of the parent, with advice in regard to the same, and referred to the family physician. There need be no conflict with the family physician if sick children are merely sent home. Professional treatment ought to be received at the home, the hospital, or the dispensary.

Such work can be most effectively carried on by the board of health, as in the plan adopted in the city of Boston, to which reference was made in your previous report. The physicians visit each day every school in the city and report the same daily to the board of health. It is highly necessary that the men chosen for such work be not only competent and disinterested physicians, but that they be at the same time experts on the whole subject of school sanitation.

PEDAGOGICAL LIBRARY.

At the Franklin school in the pedagogical library, which is of only three years' growth, our teachers have access to many of the best books on physical training and related subjects. The selection was not only carefully made but is quite complete. Much of our latest and best material is to be found in pamphlet form, being reprints of articles found in medical and educational journals. Certain reports of State Boards of Health and public documents containing valuable articles bearing more or less directly on this subject, have been laboriously collected. Full sets of reports of the American Association for the Advancement of Physical Education, also of the Pedagogical Seminary, have been specially bound for preservation. The Physical Education Review, the Pedagogical Seminary, the Gymnasium, and Werner's Magazine are regularly subscribed for by the library. With such a wealth of material, any teacher so desiring has the opportunity to keep abreast of the best literature on the subject this country affords.

BIBLIOGRAPHY.

The city of Washington presents such unusual library facilities for one working in the special study of a subject that I have taken advantage of the opportunity to make a collection as complete as possible of all which I could find in English bearing on this subject, the same to be a contribution to the bibliography of physical training. The names of all articles to be found in the Boston Public Library, the library of the Surgeon-General, and of the Bureau of Education have been collected. The subject, with its author and reference, is written on duplicate cards, making two sets, these arranged alphabetically, one with regard to the subject, the other with regard to the author. By means of such a bibliography one is able to trace the history of the subject in this country and England, and speedily to refer to what has been written in English on any branch of the general subject.

CONCLUSION.

There is no doubt that the strength of our work consists in the personal contact of the special instructor with the teacher and her class. Schoolroom suggestions and criticisms are the most effective means of securing the best results. The special teacher learns to know her pupils as individuals, and takes a friendly interest in each. She is enabled to advise and cooperate with the teacher in all those cases which, from the standpoint of health, call for special attention.

It is impossible to test the full measure of success or failure of our efforts. It is in the remote future, with school days long past, that the lasting influence of such work will be felt by the individual child. That the bodies of our children in school are better formed, better carried,

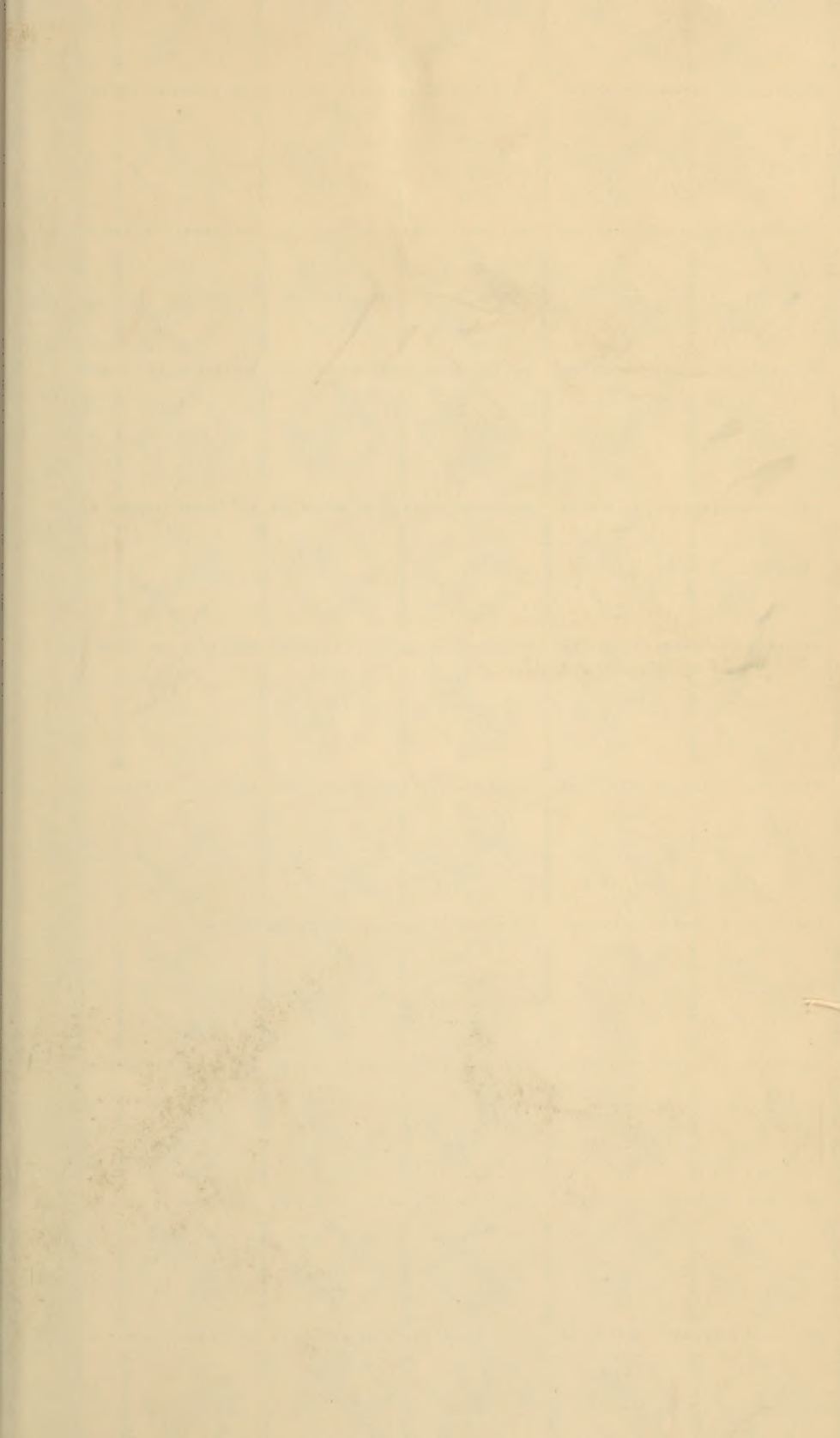
and more gracefully used there is no doubt. The special teacher is invariably able to pick out the child who has not received previous training in this work. The improvement has been so gradual that it is doubtful if we appreciate how much has been accomplished in the last eight years.

Respectfully submitted.

REBECCA STONEROAD.

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